Claims as Pending

1. An isolated nucleic acid molecule encoding an acquired resistance polypeptide comprising an ankyrin repeat, wherein said acquired resistance polypeptide confers, on a plant expressing said polypeptide, resistance to a plant pathogen.

2. The isolated nucleic acid molecule of claim 1, wherein said polypeptide activates the expression of a pathogenesis-related polypeptide.

4. The isolated nucleic acid molecule of claim 1, wherein said isolated nucleic acid molecule is derived from an angiosperm.

5. The isolated nucleic acid molecule of claim 4, wherein said angiosperm is a member of the *Solanaceae*.

6. The isolated nucleic acid molecule of claim 4, wherein said angiosperm is a member of the *Cruciferae*.

7. The isolated nucleic acid molecule of claim 1, wherein said nucleic acid molecule is genomic DNA.

8. The isolated nucleic acid molecule of claim 1, wherein said nucleic acid molecule is cDNA.

9. The isolated nucleic acid molecule of claim 1, wherein said plant pathogen is a bacterium, virus, viroid, fungus, nematode, or insect.

10. An isolated nucleic acid molecule that specifically hybridizes to a nucleic acid molecule comprising the genomic nucleic acid sequence of Fig. 4 (SEQ ID NO:1), wherein said isolated nucleic acid molecule encodes an acquired resistance polypeptide comprising an ankyrin repeat that confers, on a plant expressing said polypeptide, resistance to a plant pathogen.

11. An isolated nucleic acid molecule that specifically hybridizes to a nucleic acid molecule comprising the cDNA of Fig. 5 (SEQ ID NO:2), wherein said isolated nucleic acid molecule encodes an acquired resistance polypeptide comprising an ankyrin repeat that confers, on a plant expressing said polypeptide, resistance to a plant pathogen.

25. The transgenic plant of claim 24, wherein said dicot is a cruciferous plant.

26. The transgenic plant of claim 24, wherein said dicot is a solanaceous plant.

27. The transgenic plant of claim 23, wherein said transgenic angiosperm is a monocot.

28. A seed from the transgenic plant of claim 22.

29. A cell from the transgenic plant of claim 22.

36. A method of producing an acquired resistance polypeptide, said method comprising the steps of:

(a) providing a cell transformed with the isolated nucleic acid molecule of any one of claims 1 or 10-12 or the vector of claim 16;

(b) culturing the transformed cell to express the nucleic acid molecule or the vector; and

(c) recovering the acquired resistance polypeptide.

40. A method of providing an increased level of resistance against a disease caused by a plant pathogen in a transgenic plant, said method comprising the steps of:

(a) producing a transgenic plant cell comprising the nucleic acid molecule of any one of claims 1 or 10-12 or the vector of claim 16; and

(b) regenerating a transgenic plant from the plant cell wherein the nucleic acid molecule or the vector is expressed in the transgenic plant and the transgenic plant is thereby provided with an increased level of resistance against a disease caused by a plant pathogen.

41. The method of claim 40, wherein said plant pathogen is a bacterium, virus, viroid, fungus, nematode, or insect.

42. The method of claim 40, wherein said plant pathogen is *Phytophthora*, *Peronospora*, or *Pseudomonas*.

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